

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1 – 11 (canceled).

Claim 12 (previously presented): A method for injecting carbon dioxide into a pressurized gaseous stream, said method comprising:

- a) converting liquid carbon dioxide into two-phase “gas + solid” carbon dioxide, wherein said liquid carbon dioxide is converted with a direct expansion device;
- b) injecting a second gas into said two-phase carbon dioxide; and
- c) injecting the mixture of said two-phase carbon dioxide and said second gas into a pressurized gas stream with an injector, wherein said injector is connected to the chamber containing said stream.

Claim 13 (original): The method of claim 12, further comprising injecting said two-phase carbon dioxide into about the center of said stream, wherein:

- a) at least part of said two-phase carbon dioxide is distributed substantially in the direction of stream flow; and
- b) at least part of said two-phase carbon dioxide is distributed in a direction substantially against said flow.

Claim 14 (previously presented): The method of claim 12, wherein said second gas comprises gaseous carbon dioxide withdrawn from upstream of said expansion device.

Claim 15 (previously presented): A method which may be used for injecting carbon dioxide into a pressurized gaseous stream, said method comprising:

- a) converting liquid carbon dioxide into two-phase "gas + solid" carbon dioxide, wherein said liquid carbon dioxide is converted with a direct expansion device;
- b) injecting a second gas into said two-phase carbon dioxide;
- c) injecting the mixture of said two-phase carbon dioxide and said second gas into a pressurized gas stream with an injector, wherein said injector is connected to the chamber containing said stream; and
- d) adjusting the amount of said mixture injected into said stream based upon a measured parameter of said stream, wherein:
 - said parameter is measured at a location substantially downstream of said injector; and
 - said parameter comprises at least one member selected from the group consisting of:
 - 1) a physical characteristic of said stream; and
 - 2) a chemical characteristic of said stream.

Claim 16 (canceled)

Claim 17 (currently amended): ~~The apparatus of claim 16~~ An apparatus which may be used for enriching a gas stream with carbon dioxide, said apparatus comprising:

- a) a variable flow expansion valve;
- b) an injector connected to a chamber, wherein said chamber contains a gas stream;
- c) a T-piece having an upper end, a lower end, and a side, wherein said upper end of said T-piece is connected to an outlet of said valve, and said lower end of said T-piece is connected to said injector;
- d) a device adapted to supply said valve with liquid carbon dioxide; and

e) a device for feeding said T-piece with an inerting gas, said device for feeding said T-piece is connected to said side of said T-piece, wherein said injector further comprises:

[[a)] 1) a deflector located at an end of said injector, wherein said deflector comprises two slopes for distributing two-phase carbon dioxide into said gas stream, wherein:

[[1)] at least part of said carbon dioxide is distributed substantially in the direction of stream flow; and

[[2)] at least part of said carbon dioxide is distributed in a direction substantially against said flow; and

[[b)] 2) at least two openings for said carbon dioxide, wherein said openings are positioned to distribute said carbon dioxide along the axis of transfer of said stream.

Claim 18 (canceled)

Claim 19 (canceled)

Claim 20 (canceled)

Claim 21 (previously presented): The apparatus of claim 17, wherein said slopes form an angle of about 80° with respect to each other.

Claim 22 (canceled)